



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

NOTES AND NEWS.

THE morning session of the holiday meeting of the Syracuse Section was given to the discussion of the qualifications of the teachers of high-school mathematics. The discussion was opened by A. N. Smith, of Colgate University, who spoke substantially as follows:

As a teacher of college mathematics, I find my knowledge of the difficulties under which the teachers of secondary mathematics labor is largely a matter of conjecture based on the work done by the average freshman and such information, more or less dependable, as I am able to obtain directly from my pupils. I have endeavored, however, in preparation for this meeting to obtain the opinions of representative college and high-school teachers as to the actual and the desirable preparation of those who teach the mathematics of our high schools.

In carrying out this plan, I have asked the following questions of the college instructors:

"1. What defects do you notice in the preparatory training of freshmen?

"2. From your experience, what do you consider to be the principal defects in the high-school teaching?

"3. What preparation do you think should be required of those who teach mathematics through trigonometry?

"4. Do you favor the requiring of a certificate of proficiency?"

Replies to these questions were received from Penn State, Dartmouth, Cornell, Vassar, Hobart, Hamilton, Wells, Hillsdale, The University of Chicago, and Wisconsin. The prevailing opinion on the first question is well expressed in this reply from one institution:

"We have little to say in praise of the preparatory training of the freshmen. The average freshman knows very little about mathematics and what little he does know, he does not know well. His arithmetic and his algebra are usually atrocious.

Whatever he can do, he does in a purely formal manner with no insight into the reasons for the processes employed."

As to the underlying causes for these defects. I quote again from the same letter:

"To little attention is paid to the maintaining of a proper view point and to an understanding of the fundamental principles underlying the processes employed. Too often the reason for the poor teaching is that the teacher can not impart the proper view point and understanding because he does not have it himself."

It was to be expected that the college men would be unanimous in considering a college course with mathematics as a major as a minimum preparation for high-school teaching. Opinions as to the advisability of a certificate were about evenly divided in as much as some doubted the efficacy of such a requirement.

Questionnaires were also sent to some three hundred high-school teachers of New York State to which one hundred forty replies were received. The conclusions reached from a study of these replies were as follows:

69 per cent. were college graduates.

21 per cent. were normal graduates.

60 per cent. were specializing in mathematics.

40 per cent. were teaching mathematics "on the side."

66 per cent. of the college graduates were specialists in mathematics.

77 per cent. of the specialists were college graduates.

The training received by these teachers in mathematical courses was as follows:

21 per cent. had taken normal training courses in mathematics.

13 per cent. had taken one year of college mathematics.

25 per cent. had taken two years of college mathematics.

11 per cent. had taken college courses in pedagogy.

16 per cent. made no report.

7 per cent. had no preparation of any sort in mathematics.

10 per cent. considered that the only necessary preparation was to have covered the ground in advance of teaching.

10 per cent. would require a course in methods in addition.

10 per cent. would require one year of college mathematics.

27 per cent. would require mathematics through the calculus.

8 per cent. would require a college course; no mention being made of special courses in mathematics.

Following the presentation of these facts the meeting was opened for general discussion as to the advisability of a qualifying certificate for the teaching of high-school mathematics in New York State. Among those present who spoke was Mr. Seymour of the State Education Department. The difficulties and objections raised to such a plan were well expressed by an extract from a letter in which the writer said :

"Personally I am very much in favor of establishing some sort of qualification test in all high-school subjects. However, just at present there are certain practical difficulties. There is a scarcity of teachers, the salaries are unattractive, etc. These questions vitally affect the small schools. In fact, until the State finds some way of reorganizing the small high schools where one teacher often has to take care of six or more subjects, there is little hope.

"I have often made a plea for separate grades of certificates ; *e. g.*, a rural school may be left free to accept a certain minimum certificate (proportional to the small salary paid) but a large town or city should insist on better qualifications and demand a major certificate. Thus in a small school a teacher might hold a license for two or more minors but in a large school a major should be demanded."

The consensus of opinion of those present as a result of the discussion is indicated in the following motions :

1. It was voted to recommend to the State Department of Education the granting of a qualifying certificate to those desiring to teach mathematics in the high schools of the State, the holding of a certificate not being compulsory at present.

2. It was voted to appoint a committee to formulate what should be considered a minimum for the granting of such a certificate.

MEETING OF ASSOCIATION OF TEACHERS OF SECONDARY MATHEMATICS.

On January 30 and 31, 1920, the annual meeting of the Association of Teachers of Secondary Mathematics in North Caro-

lina was held at the North Carolina College for Women, Greensboro, N. C.

The women who were in attendance were entertained while in Greensboro by the college. More than forty teachers were present. On the afternoon of January 30, the college gave an informal tea in honor of the Association.

Mr. W. W. Rankin, professor of mathematics, University of North Carolina, who is the executive secretary of the Association, is on a year's leave of absence for graduate work at Columbia University, N. Y. His absence necessitated double work for the president, Miss Cora Strong, of the North Carolina College for Women, in planning the program and in making other arrangements for the meeting.

Professor L. C. Karpinski, of the University of Michigan, was the distinguished speaker invited to address the Association. On Friday evening he made his first address, an illustrated lecture on "The History of Algebra." This meeting was open to all the college students of the city and also to the students of the nearby colleges. His second lecture, "The Methods and Aims in the Study of Mathematics," was given on Saturday morning. On Saturday afternoon, he spoke on "The Practical Applications of High-School Mathematics." He made the teachers realize how intensely alive and useful their science is, showing how the plan of a large auditorium, the reflector of an automobile, the arch of Hell Gate Bridge, the path of a projectile and the orbit of a comet are all reflections of an algebraic equation, and how the price of a railroad ticket may really be said to depend upon the binominal theorem.

Miss Irene Templeton gave a summary of the recent preliminary report of the *National Committee on Mathematical Requirements* on the "Reorganization of the First Courses in Secondary School Mathematics." A committee was appointed to get the consensus of opinion of the teachers of secondary mathematics in North Carolina and communicate with Professor J. W. Young, chairman of the national committee.

The following officers were elected for the year 1920: *President*, Mr. A. W. Hobbs, University of North Carolina; *First Vice-president*, Mr. T. C. Amick, Elon College, Elon, N. C.;

Second Vice-president, Miss Fannie B. Robertson, Fayetteville High School, Fayetteville, N. C.; *Recording Secretary*, Miss Birdie McKinney, Teachers Training School, Greenville, N. C.; *Permanent Secretary*, Mr. W. W. Rankin, University of North Carolina.

MARIA A. GRAHAM,
Recording Secretary, 1919.

At the last meeting of the General Education Board in New York on February 28, the sum of \$25,000 was appropriated for the use of the National Committee on Mathematical Requirements to continue its work for the year beginning July 1, 1920.

A preliminary report on "The Reorganization of the First Courses in Secondary School Mathematics" was published for the Committee by the U. S. Bureau of Education about the middle of February. It has been distributed widely. Copies of the report have gone to all the state departments of education, to all county and district superintendents in the United States and to all city superintendents in cities and towns of over 2,500 population. It has been sent to all the normal schools in the country, to some 1,500 libraries and to almost 300 periodicals and newspapers. In addition it has been sent to about 4,500 individuals, the names and addresses of which were furnished the Bureau of Education by the National Committee. This list of individuals consists chiefly of teachers of mathematics and principals of schools throughout the country. Additions to this mailing list to secure future copies of the reports of the Committee can still be made. Individuals interested in securing these reports should send their names and addresses to the Chairman of the Committee (J. W. Young, Hanover, N. H.).

A subcommittee consisting of Professor C. N. Moore of the University of Cincinnati, Mr. W. F. Downey of Boston and Miss Eula Weeks of St. Louis has been appointed to prepare a report for the Committee on Elective Courses in Mathematics for Secondary Schools. Any material or suggestions for this report may be sent directly to the chairman of the subcommittee.

The recent work of the National Committee had a place on the program of the organization meeting of the National Council of Teachers of Mathematics held in Cleveland on February 24 in

connection with the meeting of the Department of Superintendence of the National Education Association. The meeting for the organization of the National Council was enthusiastically attended. A constitution was adopted and officers and an executive committee elected. Mr. J. A. Foberg of the National Committee on Mathematical Requirements was elected Secretary-Treasurer of the National Council.

Recent meetings of teachers at which the reports of the National Committee have been discussed have taken place in New York City, Cincinnati, San Francisco, Cleveland, Oklahoma, Philadelphia, Springfield (Mass.), Providence (R. I.). Meetings in April will take place in Alabama, Illinois, Iowa, Michigan and Kentucky.

CONGRÈS INTERNATIONAL DES MATHÉMATIENS

Dans sa première réunion du 24 Décembre 1919, le Comité National Français des Mathématiques, après avoir choisi comme Président d'Honneur: M. Jordan; Président: M. Picard; Vice-Présidents: MM. Appell, Borel, Lecornu, Le Roux; Secrétaire général: M. Kœnigs; Secrétaire: M. Galbrun; Trésorier: M. Maluski, s'est occupé de l'organisation du Congrès des Mathématiciens qui, suivant le vœu émis à Bruxelles par l'Union Internationale provisoire des Mathématiciens¹ doit se tenir à Strasbourg, en 1920.

Il a l'honneur d'inviter à participer aux travaux du Congrès les Mathématiciens des Nations de l'Entente et ceux des Nations neutres dont la liste a été arrêtée par la Troisième Conférence interralliée des Académies, tenue à Bruxelles en Juillet 1919. Il leur fait savoir qu'il sera reconnaissant à chacun de lui adresser le plus tôt possible son adhésion personnelle pour des raisons d'organisation faciles à comprendre.

La date de l'ouverture du Congrès sera fixée au 22 Septembre.

¹ L'Union Internationale provisoire, fondée par les Mathématiciens présents à la Conférence interralliée des Académies scientifiques, tenue à Bruxelles en Juillet 1919, a constitué son bureau comme suit: Présidents: MM. Lamb, Picard, Volterra; Président: M. de la Vallée Poussin; Vice-Président: M. Young; Secrétaires: MM. de Donder, Koenigs, Petrowich, Reina.

Il se divisera en quatre sections qui seront subdivisées elles-mêmes en autant de sous-sections que le nombre et la nature des Communications l'exigeront.

Section I.—Arithmétique—Algèbre—Analyse.

Section II.—Géométrie.

Section III.—Mécanique—Physique mathématique — Mathématiques appliquées.

Section IV.—Questions philosophiques, historiques, pédagogiques.

Des comptes rendus comportant au moins un résumé des travaux du Congrès seront envoyés à chaque souscripteur.

Un programme détaillé donnant les indications concernant le voyage et le logement ainsi que celles relatives aux réceptions et excursions organisées sera publié ultérieurement.

E. PICARD,

Le Président du Comité National Français.

Renseignements Complémentaires.

I. Les droits d'inscription en qualité de Membre du Congrès sont fixés à 60 francs par personne payables à M. Valiron, Trésorier du Congrès (52, Allée de la Robertsau, Strasbourg).

Moyennant une cotisation de 30 francs, toute personne de la famille d'un des membres aura droit aux mêmes privilèges que celui-ci, à l'exception de l'envoi d'un exemplaire des comptes rendus.

II. Toute personne désireuse de faire une ou plusieurs Communications au Congrès est priée d'en aviser M. Koenigs, Secrétaire général du Comité National Français (96, Boulevard Raspail, Paris) et de lui en faire connaître le sujet avant le 1^{er} Juillet.

III. Pour toute demande de renseignements, s'adresser soit à M. Koenigs, soit à M. Villat, Président du Comité local d'organisation du Congrès (11, rue du Maréchal-Pétain, à Strasbourg), soit à M. Galbrun, Secrétaire du Comité National Français (14, avenue Émile-Deschanel, Paris).

Millions of Americans are thinking today along wrong lines. Their trend of thought and action is toward extravagance rather than toward production, toward luxuries rather than toward necessities, toward spending rather than saving and toward speculation rather than toward safe productive investment.

It requires no deep knowledge of economics to deduce the danger from such a trend of thought and action, not only to the individual but to the nation and to the world. The inexorable laws of supply and demand still function. Conditions can only return to the safe and the normal when increased production and decreased consumption restore the equilibrium of prosperity; when spending is met by saving; when the desire to get rich quick is tempered by safety and sane profit.

But thought must precede action. It is necessary for America to think right in order that her citizens may act right. To guide the trend of public thought is both the duty and the privilege of the university men of America. They must teach the lesson of thrift and economy, of working and saving; lay the foundations of sound economic knowledge and practise. There is but one other way for America to learn sound financial habits, that is by experience through economic and financial crash which will bring untold suffering in its trail.

It is within the province of leaders of thought among whom university men take the higher places, to make that crash unnecessary, but they must influence the trend of public thought not only by economic precept but by individual example. It is to be hoped therefore that college men everywhere will ally themselves with the movement to make thrift a national habit which is being waged by the Savings Division of the Treasury Department.

Through the government backed savings societies, which utilize safe and profitable government savings securities to promote the habit of saving and safe investment, the direction of public thought may be changed into safe and profitable channels.—John B. Creeden, President, Georgetown University.

**What are YOU doing
for the Association and
for The Mathematics
Teacher**

**Don't you know some
teacher who needs the
Association and the ma-
gazine, or some firm
that should advertise in
the magazine?**

**DON'T LEAVE IT
ALL TO THE
EDITORS!**